



What is claimed is:

1. A method for removing contaminates from ink jet printer components, comprising the steps of:

5 providing a Nd-YAG laser, the Nd-YAG laser capable of generating an output;

frequency multiplying the Nd-YAG laser output to generate various beams;

10 applying various beams of the frequency multiplied Nd-YAG laser output to the ink jet printer components to remove contaminates on the ink jet printer components.

2. A method as claimed in claim 1 wherein the step of frequency multiplying the Nd-YAG laser output comprises the step of approximately doubling the laser output to produce a green laser light.

15 3. A method as claimed in claim 1 wherein the step of frequency multiplying the Nd-YAG laser output comprises the step of approximately tripling the laser output to produce an ultraviolet laser light.

20 4. A method as claimed in claim 1 wherein the step of applying the frequency multiplied Nd-YAG laser output further comprises the step of applying a pulsed laser output.

25 5. A method as claimed in claim 1 wherein the step of applying the frequency multiplied Nd-YAG laser output further comprises the step of applying greater than 300 microjoules pulses to the ink jet components.



6. A method as claimed in claim 1 wherein the step of applying the frequency multiplied Nd-YAG laser output further comprises the step of applying less than 3000 microjoules pulses to the ink jet components.
- 5 7. A method as claimed in claim 1 wherein the ink jet printer components comprises an orifice plate.
8. A method as claimed in claim 1 wherein the ink jet printer components comprises a charge plate.
- 10 9. An apparatus for removing contaminates from ink jet printer components, comprising:
 a Nd-YAG laser, the Nd-YAG laser capable of generating an output;
- 15 means for frequency multiplying the Nd-YAG laser output;
 means for applying the frequency multiplied Nd-YAG laser output to the ink jet printer components to remove contaminates on the ink jet printer components.
- 20 10. An apparatus as claimed in claim 9 wherein the means for frequency multiplying the Nd-YAG laser output comprises means for approximately doubling the laser output to produce a green laser light.
- 25 11. An apparatus as claimed in claim 9 wherein the means for frequency multiplying the Nd-YAG laser output comprises means for approximately tripling the laser output to produce an ultraviolet laser light.
12. An apparatus as claimed in claim 9 further comprising a microscope coupled thereto for viewing the ink jet printer components being cleaned.



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13. An apparatus as claimed in claim 9 further comprising a means coupled to the apparatus for inspecting the ink jet printer components to be cleaned.

14. An apparatus as claimed in claim 13 wherein laser cleaning is selectively applied to the ink jet components as determined by the inspection means.

15. An apparatus as claimed in claim 9 wherein the means for applying comprises optical fiber means for directing the Nd-YAG laser output.

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